Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

28. (Currently Amended) A cryo-therapy device, comprising:

a shaft having a proximal end and a distal end;

a cooling chamber disposed at the distal end of the shaft and defining an interior space~~comprising an inner member~~;

a coolant intake tube disposed within the shaft, the coolant intake tube having a distal opening in fluid communication with the interior space ~~inner member~~ of the cooling chamber and arranged to create a phase change in fluids introduced through the coolant intake tube, and

an exhaust tube disposed within the shaft, the exhaust tube having a distal opening in fluid communication with the interior space~~inner member~~ of the cooling chamber.

29. (Cancelled)

30. (Currently Amended) The device in accordance with claim [[29]]28, wherein the shaft further comprises an inflation lumen in fluid communication with [[the]]a balloon positioned around the cooling chamber.

31. (Original) The device in accordance with claim 28, further comprising an outer sheath disposed over at least a portion of the shaft that defines a vacuum lumen therebetween.

32. (Currently Amended) The device in accordance with claim 28, further comprising one or more thermal-resistive sensors disposed proximate the cooling chamber ~~inner member~~.

Claims 33 – 35 (Cancelled)

36. (Original) The device in accordance with claim 32, further comprising an outer sheath disposed over at least a portion of the shaft that defines a vacuum lumen therebetween.

37. (Original) The device in accordance with claim 32, further comprising one or more thermal-resistive sensors disposed proximate the cooling [[member]] chamber.

38. (Currently Amended) A method of causing cold-induced [[necrosis]] tissue treatment, comprising the steps of:

providing a catheter having a cooling chamber ~~including a shaft having a proximal end, a distal end, and a guidewire lumen extending at least partially therethrough; a cooling chamber disposed at the distal end of the shaft; a coolant intake tube disposed within the shaft, the coolant intake tube having a distal opening in fluid communication with the cooling chamber; and an exhaust tube disposed within the shaft, the exhaust tube having a distal opening in fluid communication with the cooling chamber~~;

advancing the [[catheter across a lesion]] cooling chamber near tissue to be treated in a patient's vasculature; and

delivering liquid coolant through [[the]] a coolant intake tube in the catheter and causing a phase change in the coolant [[to the cooling chamber]] to cool the lesion.

39. (Currently Amended) The method in accordance with claim 38, further comprising the step of [[draining]] exhausting gaseous coolant from the cooling chamber through [[the]] an exhaust tube.

40. (Currently Amended) The method in accordance with claim 38, wherein the step of delivering coolant through the coolant intake tube to the cooling chamber to cool the [[lesion]] tissue decreases the temperature of the cooling chamber within the range of about -40°C to about 20°C.

41. (Currently Amended) The method in accordance with claim 38, further comprising the step of freezing a portion of the [[lesion]] tissue.